LISTING OF CLAIMS

1 – 36 (canceled)

37. (new) A method for delaying the onset or progression of a dementia associated with a disorder of the central nervous system (CNS), reducing the risk of such dementia, or treating such dementia comprising administering to a patient in need of such treatment a first amount of an 1-aminocyclohexane derivative and a second amount of an acetylcholinesterase inhibitor (AChEI), said first and second amounts in combination being effective in treating said dementia.

38. (new) The method of Claim 37, wherein the 1-aminocyclohexane derivative and the acetylcholinesterase inhibitor (AChEI) are administered conjointly.

39. (new) The method of Claim 38, wherein the 1-aminocyclohexane derivative and the acetylcholinesterase inhibitor (AChEI) are administered in a single formulation.

40. (new) The method of Claim 37, wherein the 1-aminocyclohexane derivative and the acetylcholinesterase inhibitor (AChEI) are administered at dosages which, when combined, provide a beneficial therapeutic effect.

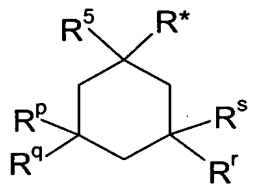
41. (new) The method of Claim 40, wherein said dosages for each of the 1-aminocyclohexane derivative and the acetylcholinesterase inhibitor (AChEI) are in the range of 1 to 200 mg per day.

42. (new) The method of Claim 41, wherein said dosages for the 1-aminocyclohexane derivative are in the range of 10 to 40 mg per day and said dosages for the acetylcholinesterase inhibitor (AChEI) are in the range of 5 to 24 mg per day.

43. (new) The method of Claim 37, wherein the CNS disorder is selected from the group consisting of Alzheimer's disease (AD), cerebrovascular disease (VaD), and Down's Syndrome.

44. (new) The method of Claim 37, wherein the CNS disorder is an Alzheimer's disease (AD).

45. (new) The method of Claim 37, wherein the 1-aminocyclohexane derivative is represented by the general formula (I):



(I)

wherein:

- R^* is $-(A)_n-(CR^1R^2)_m-NR^3R^4$,

  n+m = 0, 1, or 2,

  A is selected from the group consisting of linear or branched lower alkyl (C_1-C_6),linear or branched lower alkenyl (C_2-C_6), and linear or branched lower alkynyl (C_2-C_6),

  R^1 and R^2 are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), linear or branched lower alkynyl (C_2-C_6) aryl, substituted aryl and arylalkyl,

  R^3 and R^4 are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6),

and linear or branched lower alkynyl (C_2-C_6), or together form alkylene (C_2-C_{10}) or alkenylene (C_2-C_{10}) or together with the N form a 3-7-membered azacycloalkane or azacycloalkene, including substituted (alkyl (C_1-C_6), alkenyl (C_2-C_6)) 3-7-membered azacycloalkane or azacycloalkene;

- R^p, R^q, R^r, and R^s are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), linear or branched lower alkynyl (C_2-C_6), cycloalkyl (C_3-C_6) and aryl, substituted aryl and arylalkyl, it being understood that one of R^p and R^q and one of R^r and R^s combine together to represent a lower alkylene $-(CH_2)_x-$ or lower alkenylene bridge wherein x is 2-5, inclusive; and

- R^5 combines with the alkylene bridge formed by the combination of one of R^p and R^q and one of R^r and R^s to form an additional lower alkylene $-(CH_2)_y-$ or lower alkenylene bridge, wherein y is 1-3, inclusive,

and optical isomers, diastereomers, polymorphs, enantiomers, hydrates, pharmaceutically acceptable salts, and mixtures thereof.

46. (new) The method of Claim 37, wherein the 1-aminocyclohexane derivative is 1-amino adamantane or one of its derivatives selected from the group consisting of:
1-amino-3-phenyl adamantane,
1-amino-methyl adamantane,
1-amino-3,5-dimethyl adamantane (memantine),
1-amino-3-ethyl adamantane,
1-amino-3-isopropyl adamantane,
1-amino-3-n-butyl adamantane,
1-amino-3,5-diethyl adamantane,
1-amino-3,5-diisopropyl adamantane,

1-amino-3,5-di-n-butyl adamantane,

1-amino-3-methyl-5-ethyl adamantane,

1-N-methylamino-3,5-dimethyl adamantane,

1-N-ethylamino-3,5-dimethyl adamantane,

1-N-isopropyl-amino-3,5-dimethyl adamantane,

1-N,N-dimethyl-amino-3,5-dimethyl adamantane,

1-N-methyl-N-isopropyl-amino-3-methyl-5-ethyl adamantane,

1-amino-3-butyl-5-phenyl adamantane,

1-amino-3-pentyl adamantane,

1-amino-3,5-dipentyl adamantane,

1-amino-3-pentyl-5-hexyl adamantane,

1-amino-3-pentyl-5-cyclohexyl adamantane,

1-amino-3-pentyl-5-phenyl adamantane,

1-amino-3-hexyl adamantane,

1-amino-3,5-dihexyl adamantane,

1-amino-3-hexyl-5-cyclohexyl adamantane,

1-amino-3-hexyl-5-phenyl adamantane,

1-amino-3-cyclohexyl adamantane,

1-amino-3,5-dicyclohexyl adamantane,

1-amino-3-cyclohexyl-5-phenyl adamantane,

1-amino-3,5-diphenyl adamantane,

1-amino-3,5,7-trimethyl adamantane,

1-amino-3,5-dimethyl-7-ethyl adamantane,

1-amino-3,5-diethyl-7-methyl adamantane,

1-N-pyrrolidino and 1-N-piperidine derivatives,

1-amino-3-methyl-5-propyl adamantane,

1-amino-3-methyl-5-butyl adamantane,

1-amino-3-methyl-5-pentyl adamantane,

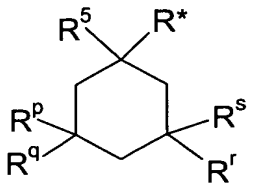
1-amino-3-methyl-5-hexyl adamantane,

1-amino-3-methyl-5-cyclohexyl adamantane,
1-amino-3-methyl-5-phenyl adamantane,
1-amino-3-ethyl-5-propyl adamantane,
1-amino-3-ethyl-5-butyl adamantane,
1-amino-3-ethyl-5-pentyl adamantane,
1-amino-3-ethyl-5-hexyl adamantane,
1-amino-3-ethyl-5-cyclohexyl adamantane,
1-amino-3-ethyl-5-phenyl adamantane,
1-amino-3-propyl-5-butyl adamantane,
1-amino-3-propyl-5-pentyl adamantane,
1-amino-3-propyl-5-hexyl adamantane,
1-amino-3-propyl-5-cyclohexyl adamantane,
1-amino-3-propyl-5-phenyl adamantane,
1-amino-3-butyl-5-pentyl adamantane,
1-amino-3-butyl-5-hexyl adamantane,
1-amino-3-butyl-5-cyclohexyl adamantane,
and optical isomers, diastereomers, enantiomers, hydrates, N-methyl, N,N-dimethyl, N-ethyl, N-propyl derivatives, pharmaceutically acceptable salts, and mixtures thereof.

47. (new) The method of Claim 37, wherein the 1-aminocyclohexane derivative is selected from the group consisting of memantine and prodrugs, salts, isomers, analogs and derivatives thereof.

48. (new) The method of Claim 37, wherein the 1-aminocyclohexane derivative is memantine.

49. (new) The method of Claim 37, wherein the 1-aminocyclohexane derivative is represented by the general formula (I):



(I)

wherein:

- R^* is $-(A)_n-(CR^1R^2)_m-NR^3R^4$,

  n+m = 0, 1, or 2,

  A is selected from the group consisting of linear or branched lower alkyl (C_1-C_6),linear or branched lower alkenyl (C_2-C_6), and linear or branched lower alkynyl (C_2-C_6),

  R^1 and R^2 are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), linear or branched lower alkynyl (C_2-C_6) aryl, substituted aryl and arylalkyl,

  R^3 and R^4 are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), and linear or branched lower alkynyl (C_2-C_6), or together form alkylene (C_2-C_{10}) or alkenylene (C_2-C_{10}) or together with the N form a 3-7-membered azacycloalkane or azacycloalkene, including substituted (alkyl (C_1-C_6), alkenyl (C_2-C_6)) 3-7-membered azacycloalkane or azacycloalkene;

- R^5 is independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), and linear or branched lower alkynyl (C_2-C_6), or R^5 combines with the carbon to which it is attached and the next adjacent ring carbon to form a double bond;

- R^p, R^q, R^r, and R^s, are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), linear or branched lower alkynyl (C_2-C_6), cycloalkyl (C_3-C_6) and aryl, substituted aryl and arylaklyl or R^p, R^q, R^r, and R^s independently may combine with the carbon atom to which it is attached and an adjacent carbon atom to form a double bond;

and optical isomers, diastereomers, polymorphs, enantiomers, hydrates, pharmaceutically acceptable salts, and mixtures thereof.

50. (new) The method of Claim 37, wherein the 1-aminocyclohexane derivative is an 1-aminoalkylcyclohexane derivative selected from the group consisting of:
1-amino-1,3,5-trimethylcyclohexane,
1-amino-1(trans),3(trans),5-trimethylcyclohexane,
1-amino-1(cis),3(cis),5-trimethylcyclohexane,
1-amino-1,3,3,5-tetramethylcyclohexane,
1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane),
1-amino-1,3,5,5-tetramethyl-3-ethylcyclohexane,
1-amino-1,5,5-trimethyl-3,3-diethylcyclohexane,
1-amino-1,5,5-trimethyl-cis-3-ethylcyclohexane,
1-amino-(1S,5S)cis-3-ethyl-1,5,5-trimethylcyclohexane,
1-amino-1,5,5-trimethyl-trans-3-ethylcyclohexane,
1-amino-(1R,5S)trans-3-ethyl-1,5,5-trimethylcyclohexane,
1-amino-1-ethyl-3,3,5,5-tetramethylcyclohexane,
1-amino-1-propyl-3,3,5,5-tetramethylcyclohexane,

N-methyl-1-amino-1,3,3,5,5-pentamethylcyclohexane,

N-ethyl-1-amino-1,3,3,5,5-pentamethyl-cyclohexane,

N-(1,3,3,5,5-pentamethylcyclohexyl) pyrrolidine,

3,3,5,5-tetramethylcyclohexylmethylamine,

1-amino-l-propyl-3,3,5,5-tetramethylcyclohexane,

1 amino-1,3,3,5(trans)-tetramethylcyclohexane (axial amino group),

3-propyl-1,3,5,5-tetramethylcyclohexylamine semihydrate,

1-amino-1,3,5,5-tetramethyl-3-ethylcyclohexane,

1-amino-1,3,5-trimethylcyclohexane,

1-amino-1,3-dimethyl-3-propylcyclohexane,

1-amino-1,3(trans),5(trans)-trimethyl-3(cis)-propylcyclohexane,

1-amino-1,3-dimethyl-3-ethylcyclohexane,

1-amino-1,3,3-trimethylcyclohexane,

cis-3-ethyl-1(trans)-3(trans)-5-trimethylcyclohexamine,

1-amino-1,3(trans)-dimethylcyclohexane,

1,3,3-trimethyl-5,5-dipropylcyclohexylamine,

1-amino-1-methyl-3(trans)-propylcyclohexane,

1-methyl-3(cis)-propylcyclohexylamine,

1-amino-1-methyl-3(trans)-ethylcyclohexane,

1-amino-1,3,3-trimethyl-5(cis)-ethylcyclohexane,

1-amino-1,3,3-trimethyl-5(trans)-ethylcyclohexane,

cis-3-propyl-1,5,5-trimethylcyclohexylamine,

trans-3-propyl-1,5,5-trimethylcyclohexylamine,

N-ethyl-1,3,3,5,5-pentamethylcyclohexylamine,

N-methyl-l-amino-1,3,3,5.5-pentamethylcyclohexane,

1-amino-l-methylcyclohexane,

N,N-dimethyl-1-amino-1,3,3,5,5-pentamethylcyclohexane,

2-(3,3,5,5-tetramethylcyclohexyl)ethylamine,

2-methyl-l-(3,3,5,5-tetramethylcyclohexyl)propyl-2-amine,

2-(1,3,3,5,5-pentamethylcyclohexyl-l)-ethylamine semihydrate,

N-(1,3,3,5,5-pentamethylcyclohexyl)-pyrrolidine,

1-amino-1,3(trans),5(trans)-trimethylcyclohexane,

1-amino-1,3(cis),5(cis)-trimethylcyclohexane,

1-amino-(1R,SS)trans-5-ethyl-1,3,3-trimethylcyclohexane,

1-amino-(1S,SS)cis-5-ethyl-1,3,3-trimethylcyclohexane,

1-amino-1,5, 5-trimethyl-3(cis)-isopropyl-cyclohexane,

1-amino-1,5,5-trimethyl-3(trans)-isopropyl-cyclohexane,

1-amino-1-methyl-3(cis)-ethyl-cyclohexane,

1-amino-1-methyl-3(cis)-methyl-cyclohexane,

1-amino-5,5-diethyl-1,3,3-trimethyl-cyclohexane,

1-amino-1,3,3,5,5-pentamethylcyclohexane,

1-amino-1,5,5-trimethyl-3,3-diethylcyclohexane,

1-amino-l-ethyl-3,3,5,5-tetramethylcyclohexane,

N-ethyl-l-amino-1,3,3,5,5-pentamethylcyclohexane,

N-(1,3,5-trimethylcyclohexyl)pyrrolidine or piperidine,

N-[1,3(trans),5(trans)-trimethylcyclohexyl]pyrrolidine or piperidine,

N-[1,3(cis),5(cis)-trimethylcyclohexyl]pyrrolidine or piperidine,

N-(1,3,3,5-tetramethylcyclohexyl)pyrrolidine or piperidine,

N-(1,3,3,5,5-pentamethylcyclohexyl)pyrrolidine or piperidine,

N-(1,3,5,5-tetramethyl-3-ethylcyclohexyl)pyrrolidine or piperidine,

N-(1,5,5-trimethyl-3,3-diethylcyclohexyl)pyrrolidine or piperidine,

N-(1,3,3-trimethyl-cis-5-ethylcyclohexyl)pyrrolidine or piperidine,

N-[(1S,SS)cis-5-ethyl-1,3,3-trimethylcyclohexyl]pyrrolidine or piperidine,

N-(1,3,3-trimethyl-trans-5-ethylcyclohexyl)pyrrolidine or piperidine,

N-[(1R,SS)trans-5-ethyl,3,3-trimethylcyclohexyl]pyrrolidine or piperidine,

N-(1-ethyl-3,3,5,5-tetramethylyclohexyl)pyrrolidine or piperidine,

N-(1-propyl-3,3,5,5-tetramethylcyclohexyl)pyrrolidine or piperidine,

N-(1,3,3,5,5-pentamethylcyclohexyl)pyrrolidine,

and optical isomers, diastereomers, enantiomers, hydrates, pharmaceutically acceptable salts, and mixtures thereof.

51. (new) The method of Claim 37, wherein the 1-aminocyclohexane derivative is selected from the group consisting of neramexane and prodrugs, salts, isomers, analogs and derivatives thereof.

52. (new) The method of Claim 37, wherein the 1-aminocyclohexane derivative is neramexane.

53. (new) The method of Claim 37, wherein the acetylcholinesterase inhibitor (AChEI) is selected from the group consisting of galantamine, tacrine, donepezil, and rivastigmine.

54. (new) The method of Claim 37, wherein the acetylcholinesterase inhibitor (AChEI) is a reversible or pseudo-reversible AChEI.

55. (new) A method for delaying the onset or progession of Alzheimer's disease (AD), reducing the risk of AD, or treating AD comprising administering to a patient in need of such treatment a first amount of an 1-aminocyclohexane derivative and a second amount of an acetylcholinesterase inhibitor (AChEI), said first and second amounts in combination being effective at improving at least one of the assessments selected from the group consisting of Severe Impairment Battery (SIB) Test, AD Cooperative Study-Activities of Daily Living (ADCS-ADL) Inventory and Clinician's Interview-Based Impression of Change Plus Version (CIBIC-plus).

56. (new) Use of a combination of an 1-aminocyclohexane derivative and an acetylcholinesterase inhibitor (AChEI) in the manufacture of a medicament for delaying the onset or progression of Alzheimer's disease (AD), reducing the risk of AD, or treating AD.

57. (new) A pharmaceutical composition for treatment of a dementia associated with a CNS disorder comprising (i) an 1-aminocyclohexane derivative, (ii) an acetylcholinesterase inhibitor (AChEI), and, optionally, (iii) a pharmaceutically acceptable carrier or excipient, wherein the 1-aminocyclohexane derivative and acetylcholinesterase inhibitor (AChEI) are present at therapeutically effective dosages.

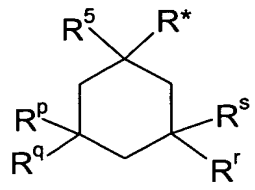
58. (new) The pharmaceutical composition of Claim 57, wherein said dosages for each of the 1-aminocyclohexane derivative and the acetylcholinesterase inhibitor (AChEI) are in the range of 1 to 200 mg.

59. (new) The pharmaceutical composition of Claim 58, wherein said dosages for the 1-aminocyclohexane derivative are in the range of 10 to 40 mg and said dosages for the acetylcholinesterase inhibitor (AChEI) are in the range of 5 to 24 mg.

60. (new) The pharmaceutical composition of Claim 57, wherein the CNS disorder is selected from the group consisting of Alzheimer's disease (AD), cerebrovascular disease (VaD), and Down's Syndrome.

61. (new) The pharmaceutical composition of Claim 57, wherein the CNS disorder is an Alzheimer's disease (AD).

62. (new) The pharmaceutical composition of Claim 57, wherein the 1-aminocyclohexane derivative is represented by the general formula (I):



(I)

wherein:

- R^* is $-(A)_n-(CR^1R^2)_m-NR^3R^4$,

  n+m = 0, 1, or 2,

  A is selected from the group consisting of linear or branched lower alkyl (C_1-C_6),linear or branched lower alkenyl (C_2-C_6), and linear or branched lower alkynyl (C_2-C_6),

  R^1 and R^2 are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), linear or branched lower alkynyl (C_2-C_6) aryl, substituted aryl and arylalkyl,

  R^3 and R^4 are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), and linear or branched lower alkynyl (C_2-C_6), or together form alkylene (C_2-C_{10}) or alkenylene (C_2-C_{10}) or together with the N form a 3-7-membered azacycloalkane or azacycloalkene, including substituted (alkyl (C_1-C_6), alkenyl (C_2-C_6)) 3-7-membered azacycloalkane or azacycloalkene;

- R^p, R^q, R^r, and R^s are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower

alkenyl (C_2-C_6), linear or branched lower alkynyl (C_2-C_6), cycloalkyl (C_3-C_6) and aryl, substituted aryl and arylalkyl, it being understood that one of R^p and R^q and one of R^r and R^s combine together to represent a lower alkylene -$(CH_2)_x$- or lower alkenylene bridge wherein x is 2-5, inclusive; and

- R^5 combines with the alkylene bridge formed by the combination of one of R^p and R^q and one of R^r and R^s to form an additional lower alkylene –$(CH_2)_y$- or lower alkenylene bridge, wherein y is 1-3, inclusive,

and optical isomers, diastereomers, polymorphs, enantiomers, hydrates, pharmaceutically acceptable salts, and mixtures thereof.

63. (new) The pharmaceutical composition of Claim 57, wherein the 1-aminocyclohexane derivative is an adamantane derivative or one of its derivatives selected from the group consisting of:
1-amino-3-phenyl adamantane,
1-amino-methyl adamantane,
1-amino-3,5-dimethyl adamantane (memantine),
1-amino-3-ethyl adamantane,
1-amino-3-isopropyl adamantane,
1-amino-3-n-butyl adamantane,
1-amino-3,5-diethyl adamantane,
1-amino-3,5-diisopropyl adamantane,
1-amino-3,5-di-n-butyl adamantane,
1-amino-3-methyl-5-ethyl adamantane,
1-N-methylamino-3,5-dimethyl adamantane,
1-N-ethylamino-3,5-dimethyl adamantane,
1-N-isopropyl-amino-3,5-dimethyl adamantane,
1-N,N-dimethyl-amino-3,5-dimethyl adamantane,
1-N-methyl-N-isopropyl-amino-3-methyl-5-ethyl adamantane,
1-amino-3-butyl-5-phenyl adamantane,

1-amino-3-pentyl adamantane,

1-amino-3,5-dipentyl adamantane,

1-amino-3-pentyl-5-hexyl adamantane,

1-amino-3-pentyl-5-cyclohexyl adamantane,

1-amino-3-pentyl-5-phenyl adamantane,

1-amino-3-hexyl adamantane,

1-amino-3,5-dihexyl adamantane,

1-amino-3-hexyl-5-cyclohexyl adamantane,

1-amino-3-hexyl-5-phenyl adamantane,

1-amino-3-cyclohexyl adamantane,

1-amino-3,5-dicyclohexyl adamantane,

1-amino-3-cyclohexyl-5-phenyl adamantane,

1-amino-3,5-diphenyl adamantane,

1-amino-3,5,7-trimethyl adamantane,

1-amino-3,5-dimethyl-7-ethyl adamantane,

1-amino-3,5-diethyl-7-methyl adamantane,

1-N-pyrrolidino and 1-N-piperidine derivatives,

1-amino-3-methyl-5-propyl adamantane,

1-amino-3-methyl-5-butyl adamantane,

1-amino-3-methyl-5-pentyl adamantane,

1-amino-3-methyl-5-hexyl adamantane,

1-amino-3-methyl-5-cyclohexyl adamantane,

1-amino-3-methyl-5-phenyl adamantane,

1-amino-3-ethyl-5-propyl adamantane,

1-amino-3-ethyl-5-butyl adamantane,

1-amino-3-ethyl-5-pentyl adamantane,

1-amino-3-ethyl-5-hexyl adamantane,

1-amino-3-ethyl-5-cyclohexyl adamantane,

1-amino-3-ethyl-5-phenyl adamantane,

1-amino-3-propyl-5-butyl adamantane,

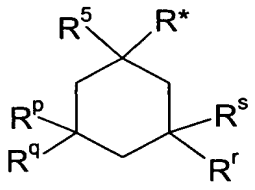
1-amino-3-propyl-5-pentyl adamantane,

1-amino-3-propyl-5-hexyl adamantane,
1-amino-3-propyl-5-cyclohexyl adamantane,
1-amino-3-propyl-5-phenyl adamantane,
1-amino-3-butyl-5-pentyl adamantane,
1-amino-3-butyl-5-hexyl adamantane,
1-amino-3-butyl-5-cyclohexyl adamantane,
and optical isomers, diastereomers, enantiomers, hydrates, N-methyl, N,N-dimethyl, N-ethyl, N-propyl derivatives, pharmaceutically acceptable salts, and mixtures thereof.

64. (new) The pharmaceutical composition of Claim 57, wherein the 1-aminocyclohexane derivative is selected from the group consisting of memantine and prodrugs, salts, isomers, analogs and derivatives thereof.

65. (new) The pharmaceutical composition of Claim 57, wherein the 1-aminocyclohexane derivative is memantine.

66. (new) The pharmaceutical composition of Claim 57, wherein the 1-aminocyclohexane derivative is represented by the general formula (I):



(I)

wherein:

- R^* is $-(A)_n-(CR^1R^2)_m-NR^3R^4$,
  n+m = 0, 1, or 2,

A is selected from the group consisting of linear or branched lower alkyl (C_1-C_6),linear or branched lower alkenyl (C_2-C_6), and linear or branched lower alkynyl (C_2-C_6),

R^1 and R^2 are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), linear or branched lower alkynyl (C_2-C_6) aryl, substituted aryl and arylalkyl,

R^3 and R^4 are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), and linear or branched lower alkynyl (C_2-C_6), or together form alkylene (C_2-C_{10}) or alkenylene (C_2-C_{10}) or together with the N form a 3-7-membered azacycloalkane or azacycloalkene, including substituted (alkyl (C_1-C_6), alkenyl (C_2-C_6)) 3-7-membered azacycloalkane or azacycloalkene;

- R^5 is independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), and linear or branched lower alkynyl (C_2-C_6), or R^5 combines with the carbon to which it is attached and the next adjacent ring carbon to form a double bond;

- R^p, R^q, R^r, and R^s, are independently selected from the group consisting of hydrogen, linear or branched lower alkyl (C_1-C_6), linear or branched lower alkenyl (C_2-C_6), linear or branched lower alkynyl (C_2-C_6), cycloalkyl (C_3-C_6) and aryl, substituted aryl and arylaklyl or R^p, R^q, R^r, and R^s independently may combine with the carbon atom to which it is attached and an adjacent carbon atom to form a double bond;;

and optical isomers, diastereomers, polymorphs, enantiomers, hydrates, pharmaceutically acceptable salts, and mixtures thereof.

67. (new) The pharmaceutical composition of Claim 57, wherein the 1-aminocyclohexane derivative is an 1-aminoalkylcyclohexane derivative selected from the group consisting of:

1-amino-1,3,5-trimethylcyclohexane,

1-amino-1(trans),3(trans),5-trimethylcyclohexane,

1-amino-1(cis),3(cis),5-trimethylcyclohexane,

1-amino-1,3,3,5-tetramethylcyclohexane,

1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane),

1-amino-1,3,5,5-tetramethyl-3-ethylcyclohexane,

1-amino-1,5,5-trimethyl-3,3-diethylcyclohexane,

1-amino-1,5,5-trimethyl-cis-3-ethylcyclohexane,

1-amino-(1S,5S)cis-3-ethyl-1,5,5-trimethylcyclohexane,

1-amino-1,5,5-trimethyl-trans-3-ethylcyclohexane,

1-amino-(1R,5S)trans-3-ethyl-1,5,5-trimethylcyclohexane,

1-amino-1-ethyl-3,3,5,5-tetramethylcyclohexane,

1-amino-1-propyl-3,3,5,5-tetramethylcyclohexane,

N-methyl-1-amino-1,3,3,5,5-pentamethylcyclohexane,

N-ethyl-1-amino-1,3,3,5,5-pentamethyl-cyclohexane,

N-(1,3,3,5,5-pentamethylcyclohexyl) pyrrolidine,

3,3,5,5-tetramethylcyclohexylmethylamine,

1-amino-l-propyl-3,3,5,5-tetramethylcyclohexane,

1 amino-1,3,3,5(trans)-tetramethylcyclohexane (axial amino group),

3-propyl-1,3,5,5-tetramethylcyclohexylamine semihydrate,

1-amino-1,3,5,5-tetramethyl-3-ethylcyclohexane,

1-amino-1,3,5-trimethylcyclohexane,

1-amino-1,3-dimethyl-3-propylcyclohexane,

1-amino-1,3(trans),5(trans)-trimethyl-3(cis)-propylcyclohexane,

1-amino-1,3-dimethyl-3-ethylcyclohexane,

1-amino-1,3,3-trimethylcyclohexane,

cis-3-ethyl-1(trans)-3(trans)-5-trimethylcyclohexamine,

1-amino-1,3(trans)-dimethylcyclohexane,

1,3,3-trimethyl-5,5-dipropylcyclohexylamine,

1-amino-1-methyl-3(trans)-propylcyclohexane,

1-methyl-3(cis)-propylcyclohexylamine,

1-amino-1-methyl-3(trans)-ethylcyclohexane,

1-amino-1,3,3-trimethyl-5(cis)-ethylcyclohexane,

1-amino-1,3,3-trimethyl-5(trans)-ethylcyclohexane,

cis-3-propyl-1,5,5-trimethylcyclohexylamine,

trans-3-propyl-1,5,5-trimethylcyclohexylamine,

N-ethyl-1,3,3,5,5-pentamethylcyclohexylamine,

N-methyl-l-amino-1,3,3,5.5-pentamethylcyclohexane,

1-amino-l-methylcyclohexane,

N,N-dimethyl-1-amino-1,3,3,5,5-pentamethylcyclohexane,

2-(3,3,5,5-tetramethylcyclohexyl)ethylamine,

2-methyl-l-(3,3,5,5-tetramethylcyclohexyl)propyl-2-amine,

2-(1,3,3,5,5-pentamethylcyclohexyl-l)-ethylamine semihydrate,

N-(1,3,3,5,5-pentamethylcyclohexyl)-pyrrolidine,

1-amino-1,3(trans),5(trans)-trimethylcyclohexane,

1-amino-1,3(cis),5(cis)-trimethylcyclohexane,

1-amino-(1R,SS)trans-5-ethyl-1,3,3-trimethylcyclohexane,

1-amino-(1S,SS)cis-5-ethyl-1,3,3-trimethylcyclohexane,

1-amino-1,5, 5-trimethyl-3(cis)-isopropyl-cyclohexane,

1-amino-1,5,5-trimethyl-3(trans)-isopropyl-cyclohexane,

1-amino-1-methyl-3(cis)-ethyl-cyclohexane,

1-amino-1-methyl-3(cis)-methyl-cyclohexane,

1-amino-5,5-diethyl-1,3,3-trimethyl-cyclohexane,

1-amino-1,3,3,5,5-pentamethylcyclohexane,

1-amino-1,5,5-trimethyl-3,3-diethylcyclohexane,

1-amino-l-ethyl-3,3,5,5-tetramethylcyclohexane,

N-ethyl-l-amino-1,3,3,5,5-pentamethylcyclohexane,

N-(1,3,5-trimethylcyclohexyl)pyrrolidine or piperidine,

N-[1,3(trans),5(trans)-trimethylcyclohexyl]pyrrolidine or piperidine,

N-[1,3(cis),5(cis)-trimethylcyclohexyl]pyrrolidine or piperidine,
N-(1,3,3,5-tetramethylcyclohexyl)pyrrolidine or piperidine,
N-(1,3,3,5,5-pentamethylcyclohexyl)pyrrolidine or piperidine,
N-(1,3,5,5-tetramethyl-3-ethylcyclohexyl)pyrrolidine or piperidine,
N-(1,5,5-trimethyl-3,3-diethylcyclohexyl)pyrrolidine or piperidine,
N-(1,3,3-trimethyl-cis-5-ethylcyclohexyl)pyrrolidine or piperidine,
N-[(1S,SS)cis-5-ethyl-1,3,3-trimethylcyclohexyl]pyrrolidine or piperidine,
N-(1,3,3-trimethyl-trans-5-ethylcyclohexyl)pyrrolidine or piperidine,
N-[(1R,SS)trans-5-ethyl,3,3-trimethylcyclohexyl]pyrrolidine or piperidine,
N-(1-ethyl-3,3,5,5-tetramethylyclohexyl)pyrrolidine or piperidine,
N-(1-propyl-3,3,5,5-tetramethylcyclohexyl)pyrrolidine or piperidine,
N-(1,3,3,5,5-pentamethylcyclohexyl)pyrrolidine,
and optical isomers, diastereomers, enantiomers, hydrates, pharmaceutically acceptable salts, and mixtures thereof.

68. (new) The pharmaceutical composition of Claim 57, wherein the 1-aminocyclohexane derivative is selected from the group consisting of neramexane and prodrugs, salts, isomers, analogs and derivatives thereof.

69. (new) The pharmaceutical composition of Claim 57, wherein the 1-aminocyclohexane derivative is neramexane.

70. (new) The pharmaceutical composition of Claim 57, wherein the acetylcholinesterase inhibitor (AChEI) is selected from the group consisting of galantamine, tacrine, donepezil, and rivastigmine

71. (new) The pharmaceutical composition of Claim 57, wherein the acetylcholinesterase inhibitor (AChEI) is a reversible or pseudo-reversible AChEI.

72. (new) A pharmaceutical dosage form for treatment of dementia comprising (i) an 1-aminocyclohexane derivative, (ii) an acetylcholinesterase inhibitor (AChEI), and,

optionally, (iii) a pharmaceutically acceptable carrier or excipient, wherein the 1-aminocyclohexane derivative and acetylcholinesterase inhibitor (AChEI) are present at therapeutically effective dosages.

73. (new) The pharmaceutical dosage form of Claim 72, which is a solid dosage form for oral administration.

74. (new) The solid dosage form of Claim 73, wherein the 1-aminocyclohexane derivative is present in an amount which is in the range of 10 to 40 mg and the acetylcholinesterase inhibitor (AChEI) is present in an amount which is in the range of 5 to 24 mg.